

DIGITAL SKILLS AND RESEARCH METHODS

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LONDON UNDERGROUND

- ❑ 1)INTRODUCTION:
In 1866 the CITY OF LONDON and SOUTHWARK SUBWAY COMPANY began work on the “TUBE” line. LONDON UNDERGROUND was the first subway in the world.
- ❑ 2)BACKGROUND OF THE ORGANIZATION:
 - HISTORY OF THE ORGANIZATION:
On 10 January 1863 was built the first subway stations. The first time trains were completely devoid of windows.
 - AIM & OBJECTIVES OF THE ORGANIZATION:
The tunnels were driven at a depth sufficient to avoid interference with building foundations or public utility works, and there was no disruption of street traffic.

(September 24, 2019 by Oliver Green)

❑ INTRODUCTION / BACKGROUND OF THE ORGANIZATION

(Rafaela-Andreea Velețean 1916795)

To begin I will present what our presentation is about. The argument concerns the London Underground. A very important way of traveling in London that everyone books every day and every hour.

Millions of people a day chose the Underground or Underground to travel to London for business or pleasure as I experienced every day, I do use the London underground very often, it's an easier way to get to your destination even if is quite expensive especially because it defer to zone to zone.

Unlike other Tube stations in other countries, the London Underground is much more organized and does work very well because people pay for the services of public transport and the organization can offer to people a good services.

The City of London started to work on the underground line in 1866 with the Southwark Subway Company. The London Underground was the first underground in the world, as reported by the news.

The tunnels were driven in a depth to avoid interference with the foundations of the buildings or the public utility works and there were no interruptions in road traffic.

A few years ago, the London Underground was used by over a billion passengers per year, with around two hundred and fifty miles of track linking around two railway stations.

The Underground launched its first air-conditioned cars in 2010 as part of its ongoing rolling stock update.

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LONDON UNDERGROUND

- ❖ SCOPE/PURPOSES OF THE ORGANIZATION:
- ❖ MISSION AND VISION OF THE ORGANIZATION:
- ❖ CURRENT STATUS AND SERVICES OF THE ORGANIZATION:

The scope of the organization is that each year the London Underground carries over one billion people across the nation's capital. The network is just under 250 miles in total length and 276 stations. London Underground has the mission to improve and expand transport in London to make a great city moving. No other city is as recognized by transport system as London.

Slide 5 (Steve Tipan 19153090)

Challenges before introducing modern technology

► Oyster card

- Before they could not know how many people were traveling.
- The Oyster card was introduced in 2003.
- The oyster card had the same sensor that the contactless.
- Consequently, the solution was to cover the card with an aluminum protector.



(Staff, 2008)

This presentation will introduce three important tools that have changed the passenger's life. First of all, I will introduce the Oyster card. Secondly, WI-FI and thirdly the CCTV (closed-circuit television).

The Oyster card: The Oyster card was introduced in 2003. It is a payment method for public transport in London, and today we can say that it has been developing a lot in the last past years. For example, before the officers responsible for the performing services could not know how many people were traveling, which now is easy to find out. Additionally, you can register your card, check all your journeys and if it is stolen or lost you can block it and get a new now.

Also, another problem was that the oyster card had the same sensor that the contactless. For this reason, it was believed that the reader was able to get information such as the citizen's rout and personal information. For example, their details, home address, telephone number, etc.

Consequently, the solution that they found was to cover the card with an aluminum protector, to prevent any personal data from being read. However, there has been no evidence of anyone being able to decrypt Oyster's information yet.

(Staff, 2008)

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WI-FI

- ▶ Wi-fi was introduced in London underground in 2012 which is now available, at 97% of all stations.
- ▶ People could not connect with others during their journey.
- ▶ Wi-fi can help those who don't speak English and make their journey easier.
- ▶ Internet can provide us with applications such as google maps, google translate and many more tools.

(Coulter,2019)

WIFI :Wi-fi was introduced in London underground in 2012 which is now available, at 97% of all stations. If you are a Virgin Media, EE, Vodafone, O2 or Three customers you can use the Wi-Fi service for free as part of your plan.

The reason why they started using this new technology is that before people could not connect with others during their journey. It can also help to understand the paths passengers take in stations, for example, the platforms, lines, routes, and interchanges they make. For some reason, having all the information on their phone is more accessible than having a map. Besides, having Wi-Fi in most of the stations has increased passenger rates and consumer satisfaction.

London is a big city with a lot of nationalities and different languages. Moreover, Wi-fi helps those who do not speak English and make their journey easier. Now, having access to Wi-fi, people who used to get lost can use applications such as google maps, google translate and many more tools that the internet can provide us.

(Coulter,2019)

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CCTV

- ▶ Before 1975, the London underground was controlled only for security guards.
- ▶ CCTV was introduced at four London Underground stations for security purposes.
- ▶ CCTV could not allow recognizing faces
- ▶ AnyVision allows security cameras to immediately recognize people's faces and draw up information about them.

(Smart, N.D,website)

The **CCTV**, closed-circuit television

Before 1975, the London underground was controlled only for security guards. After 1975 CCTV was introduced at four London Underground stations for security purposes. During the time more CCTV cameras were installed, for example, in depots, car parks, trains, across London's road, tunnels network, TfL bus stations, Santander Cycles docking stations, etc.

CCTV is the most effective way of security, however, before it could not allow recognizing faces, so it was a problem because they could not catch the suspect. But now with a new security technology called AnyVision allows security cameras to immediately identify people's faces and bring up information about them.

Without a doubt, new modern technology continues to improve efficiency and to present training and development challenges on an ongoing basis.

(Smart, N.D,website)



Cloud Computing is the use of hardware and software to deliver a service over a network (typically the Internet). With cloud Computing ,London Underground users can access files and use applications from any device that can access the Internet.

Changing pace of technologies brings about new challenges and offers new opportunities.

CUSTOMER-We want to develop innovative solutions to deliver faster , more frequent and reliable services to our customers while improving the information provided via frontline staff as well as mobile and internet technology.

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❖ Advantages/Disadvantages of Cloud Computing

Advantages:

- Best communication.
- Better education.
- Easier life.
- Benefits everyone.
- Advancing and improving.

Disadvantages

- Power is lost.
- Technological devices tend to be expensive .

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Technological devices tend to be expensive

As London Underground switches to computer-controlled signalling, the ability to predict and prevent degradation and failures remotely will dramatically increase.

Similarly with track, a wide-scale adoption of Automatic Track Monitoring Systems means that track condition can be identified more efficiently without many of the manual inspections currently required.

All of these technological changes will mean different skills being required by staff and allowing them to work differently.

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❖ Importance of Cloud Computing

Could Computing helps our lives to remain and become easier. ...



Could Computing helps our lives to remain and become easier. ...

Technology is considered to be extremely important in business because it provides faster and more efficient methods of getting a job done.

Positive impact:

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5)IMPACTS OF MODERN TECHNOLOGY INTRODUCED

The London Underground , is a prime example of how technology and transport go hand- in -hand.

Positive impact:

- ▶ London Underground is an example of the way that technology and transport work together.
- ▶ The first ticket machine was introduced in 1908.
- ▶ In 2003 the Oyster Card was introduced which is the intelligent card payment method RFID.
- ▶ The Oyster card has to be touched at the beginning and at the end of the journey.
- ▶ In 2014 TFL was the first public transport in the world which introduced bank card contactless payment, 2015 Apple Pay, 2016 Android Pay.

(London's Underground, The Story of the Tube - Oliver Green)

The advantages of Oyster card is that you can top up online, you can obtain an Oyster card even before to arrive in London.

Contactless payment is very efficient and easiest way to travel in London , you don't have to queue to buy a ticket for travel and you know exactly how much the journey is going to cost.

(London's Underground, The Story of the Tube - Oliver Green)

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ELECTRONIC TICKETS



“ However, there’s actually some pretty clever technology involved. In simple terms, an Oyster card uses radio frequency identification (RFID) “

LONDONIST by ALPHR

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- ▶ 1994 Sel Trac System was introduced Docklands Light Railway (DLR)
- ▶ This technology use communication with the train to operate it without needing a driver, everything goes through a computerized system, closely monitored 24h a day.
- ▶ DLR can offer better quality service with lower operational costs. It is a most ideal way to travel on peak time when is high number of passengers.

“Replacing the oldest trains on the DLR and introducing a new modern fleet will ensure the railway continues to support the current and future growth in the Docklands area.”

[“10 incredible facts you might not know about the DLR”(lifestyle LIZ CONNOR)]

DLR offers a great advantage for both passengers and operators because everything works automatize.

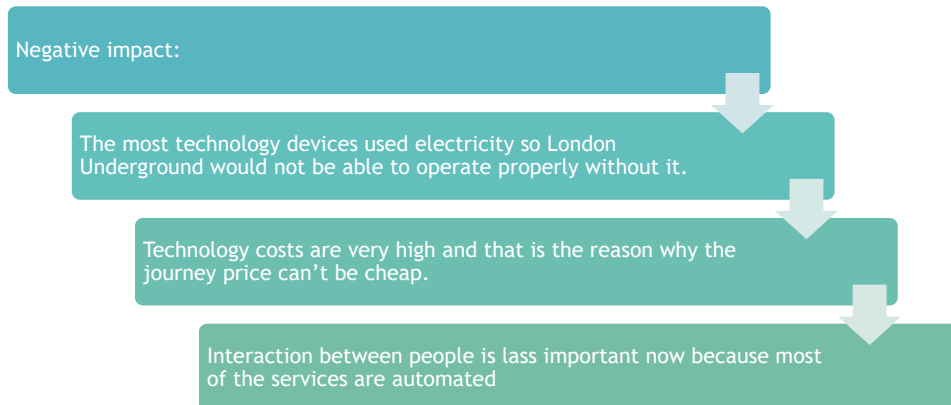
The Technology successfully complements the priorities of London in the next years.

“ Replacing the oldest trains on the DLR and introducing a new modern fleet will ensure the railway continues to support the current and future growth in the Docklands area. “

Jon Fox (the director of rail)

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NEGATIVE IMPACT:

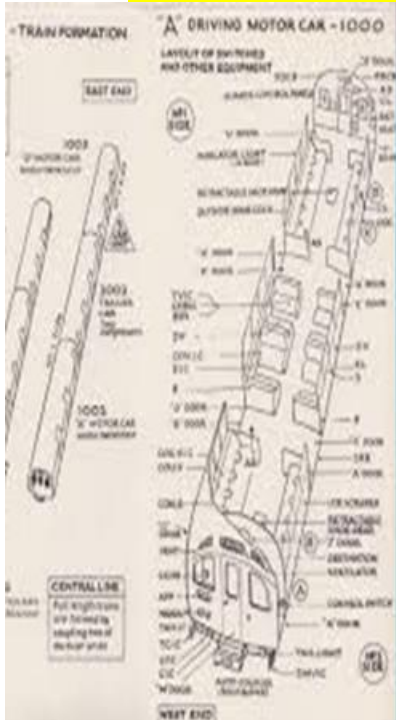
The most technology devices used electricity so London Underground would not be able to operate properly without it.

Technology costs are very high and that is the reason why the journey price can't be cheap.

Interaction between people is less important now because most of the services are automated.

(London's Underground, The Story of the Tube - Oliver Green)

Slide 15 (Andreea Bogdan 1907865)



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7) LESSONS DRAWN FROM THE CASE STUDY:

- ❖ Lack of ventilation is no longer a problem.
- ❖ There is now space access everywhere.
- ❖ Implementing of Cloud computing.
- ❖ Multiple ways to pay.

- 1 ["Why does the Tube get so hot". The Londoner](#). Archived from [the original](#) on 30 September 2007
2. London Underground. <https://www.transportforall.org.uk/public/ug/>
4. Contactless and mobile pay as you go. <https://tfl.gov.uk/fares/how-to-pay-and-where-to-buy-tickets-and-oyster/pay-as-you-go/contactless-and-mobile-pay-as-you-go>

1 : Lack of the ventilation: During the time the people complain about the heat inside the of underground because it was no ventilation ,and that create an unpleasant situation for the adults and children also.

The challenges for the staff it was to improve the efficiency of the installed ventilation with a lightweight aluminum system.

Because of the ventilation improvement of 90% there was a big increase in a passengers comfort and good feedback .

Lack of the ventilation is no longer a problem ; installing the ventilation system had many benefits : every traveller can get fresh air, the leak of gas or other dangerous substances or gas form have a faster way out. Also, the heat from the air conditioning units has a faster way out even when the trains are underground.

1. ["Why does the Tube get so hot". The Londoner](#). Archived from [the original](#) on 30 September 2007.

2: Space access everywhere: For the moment just 78 out of 270 tube stations have step free access witch are: lifts, boarding ramps .Also the space access free helps you to get easy from a platform to another using escalators as well.

The investment of hundreds of millions of pounds was successful for the people who use the underground because their journey was made more easy by having more facilities, also for disable people ,pregnant women, elders and children.

Their main objective is to have their full number of stations with step free access, but it is still a work in progress because of the high cost of work. Some of the advantages of installing lifts and escalators include time saving, avoiding high number of people filling when entering the underground train.

1. London Underground. <https://www.transportforall.org.uk/public/ug/>

3: Implementing of Cloud computing : The number of people using Wi-Fi is increasing daily, so it was only a matter of time until it got implemented in the Underground stations. For the long journeys people need to stay connected for keeping in touch, or for getting information about their destination.

The biggest advantage of using Wi-Fi is that travellers with long distance time travel can stay connected with everyone.

The disadvantage is the lack of attention they give to the surroundings, which may cause them to trip, or bump into other people, that can lead to serious harm themselves or somebody next to them.

4: Multiple ways to pay: Apple pay is generally the same as using pay as you go with a contactless payment card. You still need to touch in and out on Rail Services to pay the right fare. You can also use an Apple watch to pay. You can use Contactless cards to travel on Underground Stations. When you use them, you will pay the same fare as oyster. Everyone can pay as you go using an oyster card to travel on underground station. You need to register oyster card if you want to apply for refunds or replacement.

This is a very good adjustment to the traveling system in London underground, mainly because it's a lot easier, safer and faster to pay with your phone, bank card, without using the oyster card which needs almost weekly top up.

1. Contactless and mobile pay as you go. <https://tfl.gov.uk/fares/how-to-pay-and-where-to-buy-tickets-and-oyster/pay-as-you-go/contactless-and-mobile-pay-as-you-go>

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